

**Amendments to the Claims:**

This listing of claims will replace all prior versions and listings of claims in the application:

**Listing of Claims:**

- 5     1 (original): A method for determining whether a communication device  
is permitted to access communication service in a communication  
network, the communication device comprising:  
        a data memory capable of storing ciphertext access information;  
            and  
10          an inerasable memory capable of storing a deciphering key in a  
non-volatile way; and  
the method comprising:  
        reading the deciphering key in the inerasable memory and  
        the ciphertext access information in the data memory;  
15          and  
        deciphering the ciphertext access information to plaintext  
access information according to the deciphering key by  
using a predetermined cryptography algorithm, and  
determining whether the communication device is  
20          permitted to access communication service in the  
communication network accordingly.
- 25     2 (original): The method of claim 1 wherein the cryptography algorithm is an  
asymmetric encryption-and-decryption algorithm.
- 3     3 (original): The method of claim 1 wherein the data memory is a non-volatile  
memory.
- 30     4 (original): The method of claim 1 further comprising:  
        enciphering access information corresponding to the

communication device into the ciphertext access  
information by the cryptography algorithm according to  
an enciphering key, wherein the enciphering key  
corresponds to the deciphering key; and  
5 recording the ciphertext access information in the data  
memory.

5 (original): The method of claim 4 further comprising:  
generating the enciphering key and the corresponding deciphering key  
10 according to the cryptography algorithm before generating the  
ciphertext access information according to the enciphering key.

6 (original): The method of claim 4, wherein the communication network  
comprises a service provider capable of providing communication service to  
15 the communication device; there being a database in the service  
provider for recording the enciphering key and the access information  
corresponding to the communication device.

7 (original): The method of claim 6, wherein when generating the ciphertext access  
20 information according to the enciphering key, the service provider enciphers the  
access information corresponding to the communication device to generate the  
ciphertext access information according to the enciphering key stored in the  
database.

25 8 (original): The method of claim 7, wherein when recording the ciphertext  
access information in the data memory, transmitting the ciphertext  
access information from the service provider to the communication  
device via the communication network, and recording the ciphertext  
access information in the data memory with the communication  
30 device.

9 (original): The method of claim 4, wherein the enciphering key is different from the deciphering key.

5 10 (original): The method of claim 1, wherein when determining whether the communication device is permitted to access communication service of the communication network according to the plaintext access information, determining whether the plaintext access information conforms to predetermined access information; the communication  
10 device being determined permitted to access the communication service of the communication network if the plaintext access information conforms to the predetermined access information.

11 (original): The method of claim 1 in which the communication device  
15 further comprises a subscriber identification module card (SIM card) capable of recording a subscriber identification number, and a predetermined identification number is recorded in the plaintext access information, wherein when determining whether the communication device is permitted to access communication service  
20 in the communication network according to the plaintext access information, determining whether the subscriber identification code conforms to the predetermined identification code; the communication device being permitted to access the communication service if the predetermined identification code and the subscriber  
25 identification code correspond to each other, and the communication device being not permitted to access the communication service and having access to the communication network stopped if the predetermined identification code and the subscriber identification code do not correspond to each other.

30

12 (original): A communication device utilized in a communication network for accessing communication service of the communication network; the communication device comprising:

5           a data memory capable of storing ciphertext access information in a non-volatile way;  
          an inerasable memory capable of storing a deciphering key in a non-volatile way; and  
          a processor capable of controlling operation of the communication device;  
wherein before the communication device accesses the communication service of  
10 the communication network, the processor reads the deciphering key in the inerasable memory and the ciphertext access information in the data memory, utilizes a predetermined cryptography algorithm to decipher the ciphertext access information to plaintext access information according to the deciphering key, and  
15 determines whether the communication device is permitted to access communication service of the communication network according to plaintext access information.

13 (original): The communication device of claim 12 wherein the  
          cryptography algorithm is an asymmetric  
20        encryption-and-decryption algorithm.

14 (original): The communication device of claim 12 in which the communication network comprises a service provider for providing communication service to the communication device; there being a  
25        database in the service provider capable of recording the enciphering key and the access information corresponding to the communication device; the ciphertext access information being generated by enciphering the access information corresponding to the communication device by the cryptography algorithm according to the enciphering key,  
30        wherein the enciphering key corresponds to the deciphering key.

15 (original): The communication device of claim 14 wherein the  
enciphering key and the corresponding deciphering key are  
generated according to the cryptography algorithm.

5

16 (original): The communication device of claim 14 wherein the  
ciphertext access information is transmitted from the service  
provider to the communication device via the communication  
network, and recorded in the data memory by the communication  
device.

10

17 (original): The communication device of claim 12 wherein when the  
processor determines whether the communication device is permitted  
to access communication service according to the plaintext access  
information, the processor determines whether the plaintext access  
information conforms to predetermined access information; wherein  
the processor determining the communication device is permitted to  
access the communication service if the plaintext access information  
conforms to the predetermined access information.

15

20

18 (original): The communication device of claim 12 in which the  
communication device further comprises a SIM card capable of  
recording a subscriber identification number, and a predetermined  
identification code is recorded in the plaintext access information,  
wherein when the processor determines whether the communication  
device is permitted to access communication service according to the  
plaintext access information, the processor determines whether the  
subscriber identification code conforms to the predetermined  
identification code; the communication device being permitted to  
access the communication service if the predetermined identification

25

30

code and the subscriber identification code correspond to each other,  
and the communication device being not permitted to access the  
communication service and access to the communication network  
being stopped if the predetermined identification code and the  
5 subscriber identification code do not correspond to each other.

19 (original): The communication device of claim 12 in which the  
communication device is a cell phone, and the communication  
network is a wireless communication network.

10

20 (original): A method applied in a communication network, wherein  
the communication network comprises a plurality of communication  
devices and each communication device comprises an inerasable memory and a  
data memory; the method being capable of determining whether each  
15 communication device is permitted to access communication service of the  
communication network; the method comprising:

providing a plurality of different enciphering keys and a  
plurality of deciphering keys according to a cryptography  
algorithm, wherein each enciphering key corresponds to  
20 each deciphering key;  
providing different corresponding enciphering keys to different  
communication devices;  
enciphering access information corresponding to each  
communication device to ciphertext access information by  
25 the cryptography algorithm according to the enciphering  
key corresponding to the communication device;  
storing deciphering keys corresponding to the enciphering keys  
corresponding to each of the communication devices in the  
inerasable memory;  
30 storing ciphertext access information of each communication

device in the data memory of the communication device; and  
when determining whether a communication device is permitted  
to access the communication service, deciphering the  
ciphertext access information in the data memory by the  
5 cryptography algorithm according to the enciphering key  
stored in the inerasable memory, and determining whether  
the communication device is permitted to access the  
communication service according to the deciphered  
ciphertext access information.

10

21 (original): The method of claim 20, wherein the deciphering keys  
corresponding to different enciphering keys are different.

22 (original): The method of claim 20, wherein the cryptography algorithm is  
15 an asymmetric encryption-and-decryption algorithm such that an  
enciphering key is not equal to the corresponding deciphering key,  
and when a plaintext is enciphered into a ciphertext according to  
the enciphering key by the cryptography algorithm, the  
cryptography algorithm cannot decipher the ciphertext into the  
20 original plaintext according to the enciphering key.

23 (original): The method of claim 20, wherein the communication network further  
comprises a service provider capable of transmitting signals and providing  
communication service among communication devices; there being a database in  
25 the service provider, and the method further comprising storing enciphering  
keys corresponding to each communication device in the database.

24 (original): The method of claim 20 in which the communication device is a  
cell phone, and the communication network is a wireless  
30 communication network.